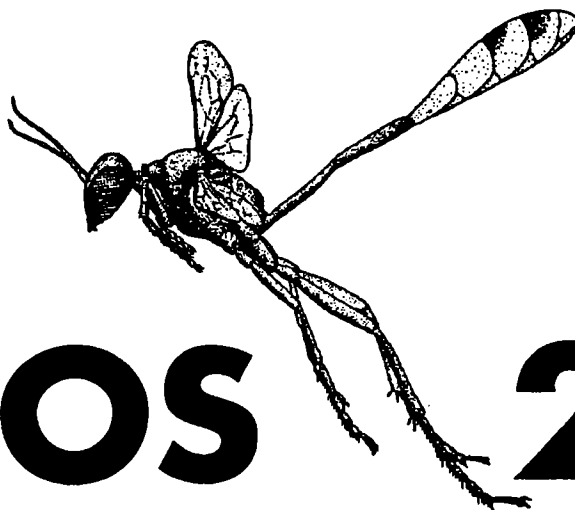


JULY 1994

# SPHECOS

# 27



A FORUM FOR ACULEATE WASP RESEARCHERS

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## Thank you, thank you, thank you!!!!

In **Sphecos 26** I outlined the financial crisis that threatened to stop production of this newsletter. My appeal for donations to help defray the cost of reproducing future issues was met by an amazing outpouring of support from the readership. Money began to come in from all corners of the globe in amounts ranging from \$5 to \$250! Some people simply sent cash in the mail, others sent checks, or even foreign currency. Many sent in more than the suggested \$5 donation. We even received donations from Russia and other east European countries in spite of all the financial hardships that people in those nations have. My wife Nancy had actually put up the money to pay for the reproduction of **Sphecos 26**, and within a few weeks the incoming donations reimbursed her outlay. The money has continued to arrive in the mail and we have now built up a sizeable fund to cover the reproduction of the current issue and at least two more! Your generosity is very much appreciated and it will insure the continuance of **Sphecos**. It is very satisfying to know that the efforts of Terry Nuhn and myself are so appreciated.

Donors to the **Sphecos** reproduction fund are listed here in chronological order. Terry, Nancy and I want to thank each of you for your support. We even got \$5 from **Bill Ashmead**!

A.S. Menke – Editor

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## RESEARCH NEWS

**Donald B. Baker** (Hope Entomological Collections, University Museum, Oxford OX1 3PW, England) writes: "The papers on the dates of the Hymenoptera of Costa's *Fauna del Regno di Napoli* and of Lucas' *Exploration scientifique de l'Algerie*, will appear shortly in *Archives of Natural History*. I did locate more Lucas wrappers, but unfortunately none that covered any Hymenoptera. So far as I know, only your Library of Congress had preserved a complete set of wrappers but all but the four Menke saw were destroyed recently when the volumes were rebound: the librarian ought to be shot! Other papers that may be of interest, accepted for publication, include ones on the Hymenoptera collected by Wallace and Allen in the Malay Archipelago and described by Smith (incidentally, the Smith bibliographies of the *Index Litteraturae Entomologicae* and, e.g., of Michener, 1965, are incomplete and inaccurate), on the collections made by Mme Ida Laura Pfeiffer (a forerunner of Wallace in Malasia), and on the provenance of the collections made in 'S.W. Persia' by Don Manuel Martinez de la Escalera: all include sphecids."

**Jerzy "George" A. Chmurzynski** (Department of Neurophysiology, Nencki Institute of Exptl. Biology, 3, Pasteur St., PL 02-093 Warsaw, Poland) writes: "After a long period of working with other insects, such as flies and the solitary bee *Dasypoda alternator* (with only a short cooperation with Schone and Tengö on the homing of *Bembix rostrata* from an unfamiliar area), I am finally returning to the "old love" of mine, preparing papers on the recognition of *Bembix* females by the males. Fortunately, the experiments were carried out a long time ago, as *Bembix* seems now to be almost extinct in my country, possibly due to pollution...."

**Arkady Lelej** (Institute of Biology and Pedology, Vladivostok-22, 690022, Russia) reports: "Last October I defended my doctoral theses, so now I have more time for wasps. After that I prepared two papers on Korean Pompilidae (with coauthors) and one on Amiseginae (with N. Kurzenko) (all papers in press)."



**ARNOLD S. MENKE**, Editor  
**TERRY NUHN**, Assistant Editor  
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**Volker Mauss** (Zool. Inst. II und Museum der Universität, Berliner Str. 28, 37073 Göttingen, Germany) writes: "I have been studying at the University of Ulm, Germany, and finished my masters thesis in 1992 (prepared at the Karl-Franzens Universität Graz, Austria, in cooperation with Doz. Dr. Papst and Doz. Dr. Crailsheim). The title of the thesis is: "Vergleichend morphologische Untersuchung des Darmtraktes mitteleuropäischer Faltenwespen (Vespidae) unter besonderer Berücksichtigung des Proventriculus." Diplomarbeit an der Mathematischen-Naturwissenschaftlichen Fakultät der Universität Ulm. It mainly deals with comparative scanning electron microscope, light microscope and morphometric investigations of crop, proventriculus and ventriculus of Central European Eumeninae, Polistinae and Vespinae. Only a small part has been published:

Mauss, V., Pabst, M.A. u. Crailsheim, K. (1990): Rasterelektronenmikroskopische Untersuchung des Proventriculus bei mehreren Arten sozialer Faltenwespen (Hymenoptera, Vespidae). Verhandlungen der Deutschen Zoologischen Gesellschaft 83:269

"Now, within the scope of a doctoral thesis, I am trying to extend these studies. First I am interested in investigating more species, especially from the Polistinae and Eumeninae. Secondly I want to study the gut from representatives of Stenogastrinae, Masarinae, Euparagiinae and Scollidae. The results should lead to perceptions about the phylogeny of the group and about functional adaptations within the gut and their evolution."

**Arnold S. Menke** has completed a review of the Neotropical species of the genus *Mellinus* (Sphecidae). Nine species are now known from the region, including two new ones from Costa Rica and one from Venezuela. Work on *Ammophila* in the New World continues....

**Elder Ferrelira Morato** (Dept. Ciências Agrárias, UFAC, CP.500, Rio Branco, AC, 69915-900 Brazil) is working on a project about the biology and diversity of several groups of solitary wasps and bees in an amazonian rain forest, in the state of Acre, Brazil.

**Enrico Negrisolio** (Via conselvana, 208 - 35020 Masarà di Padova (Pd), Italy) reports, "I am working with Guido Pagliano on a monograph of the Italian sphecoid wasp fauna. This project is going very well and we will finish the final manuscript by the end of next year. I am also compiling a checklist of Italian sphecoid wasps, sponsored by the Italian Environment Ministry. The paper is almost finished and contains about 370 species, a good number for a European country."

**Guido Nonveller** (c/o Mme J. Casevitz-Weulersse, Museum National d'Histoire Naturelle, Entomologie, 45, rue de Buffon, 7500 Paris) writes: "Thanks to the kindness of Mme Casevitz-Weulersse, and to that of the other members of the staff at the Museum National d'Histoire Naturelle, I am able to continue my studies of African Mutillidae. Several short communications have been published and others, somewhat longer, are in press: a note on the genus *Pristomutilla* with descriptions of a previously unknown male and several new species; a revision of the West Palearctic males of the genus *Stenomutilla*, along with descriptions of several new species; the description of the new genus *Seriatospidia* for the two females of Bischoff's "biseriata" group (with three new species); a revision of the genus *Lophotilla* from which I separated the Madagascan species which belong to two different genera; and the description of the new genus *Spinulomutilla* for the majority of the species classified by Bischoff in the genus *Spinulotilla*. I am also trying to continue the study of the rich collection of Madagascan Mutillidae in the Paris Museum."

**Michael Ohl** (Il. Zoologisches Institut und Museum, Berliner Str. 28, D-37037 Göttingen, Germany) says: "Collecting in Greece was very good: I netted about 1500 sphecids and 1000 aculeates other than sphecids, including some non-hymenopteran insects. Identifying groups like *Bembix*, *Tachysphex*, *Tachytes*, *Cerceris* and others will be a

hard job for me. I hope to find some taxonomists with better collections than mine, who would like to identify some of the difficult groups for me or confirm my identifications. For example, Prof K. Schmidt (Karlsruhe, Germany) is preparing a revision of the palearctic *Cerceris* and he is very happy to study my material. On the other hand, identifying groups I do not know very well might be the best way to learn much about this group. And I know there is enough for me to learn!"

**Massimo Olmi** (Dipartimento di Protezione delle Piante, Univ. degli Studi Tuscia, Via S. Camillo de Lellis, 01100 Viterbo, Italy) reports, "My revision of the world Embolemidae is in press."

**Monica Russo** (1 North Skilling, RR4, Arundel, Biddeford PO, Maine 04005) is collecting wasps from trap nests, and collecting burrowers, diggers and clay-users from open, sandy/clayey areas in Maine. She would be glad to provide specimens to anyone who asks.

**Bram Willink** (Instituto Miguel Lillo, Miguel Lillo 205, 4000 S. M. de Tucuman, Argentina) writes: "In June I hope to go to Buenos Aires and stay there several weeks working with Arturo Roig; we will see then if it would be possible to finish our *Pachodynerus* work this year. We are now getting to the more difficult and smaller problems related with new species, or doubtful species. We think that the American species are more or less settled, with *acuticarinatus* a synonym of *pulverulentus*, with a darker and a yellower form. *Astraeus* is a synonym of *praecox*. We may write a short paper on the status of the USA species."



## HELP NEEDED

### *Sphecophaga* records

Dr. Barry Donovan, a "Science Provider" in New Zealand and formerly of the D.S.I.R., is working on the control of very noxious vespid wasps with a natural enemy. Dr. Donovan would appreciate distribution and host records

for *Sphecophaga* species (Hymenoptera: Ichneumonidae: Cryptinae) in North American collections. Please e-mail your responses to me and I will send the information to Dr. Donovan. Thanks.

**Steven Krauth**  
Academic Curator  
Insect Research Collection  
Univ. of Wisconsin - Madison  
entcoll@macc.wisc.edu.

### Namibian Wasps

In November and December of this year I plan to travel to Namibia and of course I will collect bees and wasps there. As I am not experienced with the southern African fauna, and especially since the G. ARNOLD papers are quite old, I would like to ask if there are any colleagues willing and able to determine Namibian wasps. Raymond Wahis was offered to look at the pompilids.

**Michael Kuhlmann**  
Am Stockpiper 1  
D-59229 Ahlen  
Germany.

### The Monterrey Collection - PLEASE HELP!

Some time ago I received on sub-loan a collection of Pompilidae from Prof. Stehr of the Entomology Museum, Michigan State University. The depository is known only as "Monterrey, Mexico". Some specimens bear det. labels of Dreisbach, 1958. Most specimens are labelled "Monterrey, N.L., Méx." and bear the following collectors' names: M. BERMUDEZ, José CASTILLO, P. CORDERO, Eduardo DIAZ Rubio, Wm.W. GIBSON, S. GONZALEZ, Cesar H. HINOJOSA, R. IGLESIAS, Coronado LEOPOLDO, J. MATHIEU, J.J. McKELVEY, J.S. NIEDERHAUSER, Alejandro ORTEGA, F. PACHECO M., D. PEREZ Ruiz, J.L. SEDDGNO, S. Arturo VALLE, Ricardo YEPIZ R. Can anyone tell me to whom these specimens belong, please?

**Colln R. Vardy**  
Yarina  
Springwell Land  
Harefield  
Middlesex UB9 6PG  
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## NEW ADDRESSES

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**Shizuo Noguchi:** Shimoigusa 3-10-12, Suginami, Tokyo, 167 Japan.

**Till Osten:** Staatliches Museum für Naturkunde, Rosenstein 1, D-70190 Stuttgart, Germany.

**Frank Parker:** Bee Biology & Systematics Lab, Utah State University, Logan, Utah 84322-5310.

**Robert B. Parks:** 5301 N. County Road 13, Fort Collins, Colorado 80524-9446.

**Robert J. Paxton:** Ecological Research Station of Uppsala University, Ölands Skogsby, S-386 93 Färjestaden, Sweden (until 30 September 1994).

**Virginia Scott:** Museum, Henderson Building, Campus Box 218, University of Colorado at Boulder, Boulder CO 80309-0218.

**Martin Sorg:** Biologische Station Bergisches Land e.V., Schmitzbüchel 2 D-51491 Overath, Germany.

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## PEOPLE IN THE NEWS

**G.R. Brown** has been appointed curator of entomology to the Northern Territory Museum (Conacher Street, Bullocky Point, Darwin, N.T. 0820, Australia) after having spent 20 years with the Taxonomy section of the New South Wales Department of Agriculture.

## MISSING PERSONS

**William Barr** of Moscow, Idaho.  
**Kevin Bateman** of Wellington, New Zealand.  
**James DiGiuglio** of Corvallis, Oregon.  
**Eberhard Holtappels** of Trier, Germany.  
**Bernhard Jacobi** of Mulheim/R, Germany  
**Nathan Muller** of Plano, Texas.  
**Mike Yearly** of Lincoln, Nebraska.

## NECROLOGY

**Frank Morton Carpenter**, Fisher Professor of Natural History and Alexander Agassiz Professor of Zoology Emeritus at Harvard, died on January 18. He was the premier palaeoentomologist of our time. (See Recent Literature for obituaries by Brosius, Furth and Wootton)  
**John C. Felton** of Sussex, Great Britain, passed away earlier this year of cancer.

## OBITUARIES

**George C. Eickwort**  
(1940-1994)

George C. Eickwort, professor and chair of the Department of Entomology at Cornell, died July 11, of injuries sustained in an automobile accident earlier that day while vacationing on Jamaica. He was driving from the Montego Bay airport to a hotel in Ocho Rios Monday afternoon when his rental car collided with a tractor-trailer, according to the American consul there. Eickwort died Monday evening in a nearby hospital. He was 54.

A specialist in the morphology, systematics and behavior of wild bees and mites, Eickwort was a member of the College of Agriculture and Life Sciences faculty since 1967 and department chairman since 1993.

Associate Dean of Agriculture and Life Sciences **Brian Chabot** noted Eickwort's distinguished reputation as a classroom teacher and researcher:

"Students came first for George, and he always was available to visit with them and provide whatever help was needed," Chabot said of Eickwort, whose primary teaching responsibility was the introductory course in insect biology. "As a result, his impact as a mentor and friend went well beyond the classroom. He delighted in challenging graduate students during their oral exams to describe what they knew about an insect, which he just happened to have brought with him."

In 1986 Eickwort received the distinguished Achievement Award in Teaching from the Entomological Society of America. Besides Cornell, Eickwort also had taught at the Rocky Mountain Biological Laboratory, University of California at Davis, University of Arizona, University of Texas and Cornell Adult University.

Eickwort had recently begun his service as department chairman, and already "was impressing everyone with the diligence and commitment he was putting into that job," Chabot continued.

"At the same time, he was providing positive leadership to bring together the large group of insect biologists at Cornell and the Boyce Thompson Institute for Plant Research. His leadership and enthusiasm in all these roles will be greatly missed."

Eickwort's research made him a frequent sight on campus, hovering over locations of ground-nesting bees and observing their behavior. His research centered on the systematic and evolutionary studies of wild bees and the co-evolution of mites and their insect hosts.

Eickwort was an associate curator in the Cornell University Insect Collections. His extension responsibilities included identification of ticks, mites and bees for Cornell Cooperative Extension and for other scientists on a worldwide basis.

He was the editor of a series on insect biology for Cornell University Press. He was also President of the International Society of Hymenopterists.

Born June 8, 1940, in New York City, Eickwort earned his B.S. and M.S. degrees in entomology at Michigan State University, and a Ph.D., also in entomology, from the University of Kansas in 1967. He joined the Cornell faculty

as an assistant professor of entomology that same year.

He is survived by his wife, Kathleen Eickwort, of Muskegon, Mich.; a daughter, Alex, and a son, Jeffrey, both of Madison, Wisc.; another son, Robert, of Colorado; a brother, John, and his mother, both of Long Island.

from the Cornell Chronicle  
July 14, 1994



**George Carlos Wheeler**  
(1897-1991)

George C. Wheeler was a leading authority on ants. He studied under the legendary William Morton Wheeler (no relation) at Harvard University where he received his doctorate in 1921. Along with his research colleague and wife, Jenette N. Wheeler, he published numerous articles on the morphology and systematics of ant larvae, essentially establishing the field from scratch. They also published on the larvae of other social Hymenoptera, including a chapter in *The Social Insects*, edited by H. Hermann (1979) (See *Sphecos* 4, p. 40, 50). When I was a graduate student I was fortunate to meet them when they decided to drop by and retrieve a loan from me while visiting the area. I got a frantic call one morning from my major professor telling me they were here and looking through my ant collection! I rushed over to the campus and had time for a short visit. I found him to be kind, gentle person that I could respect as a human being as well as a scientist.

**Terry Nuhn**



**Katsuji Tsuneki<sup>1</sup>**  
(September 12, 1908-February 2, 1994)

The world of wasp research has lost one of its giants, and Japan has lost its most prolific hymenopterist. Katsuji Tsuneki,

<sup>1</sup>In the next *Sphecos*, we hope to present an English translation of Dr. Tsuneki's autobiography "Recollection of my Life", published in 1987 in his *Hymenopterists Communication*, vol. 27.

neki, of Mishima, Japan, who had had health problems for some time, succumbed to a heart attack, February 2, 1994, at the age of 85. He had been revising the Japanese bee genus *Sphecodes*, but the work remains unfinished. Dr. Tsuneki is survived by his wife Sumiko and three sons Tetsuya, Teruo and Sei.

Katsuji Tsuneki was born in Saitama Prefecture, and his parents were Tataro and Masa Tsuneki. He attended elementary and middle school in Saitama Pref., and then went to Tokyo Higher Normal School. He taught at the Utsunomiya girl's high school and Keijo high school. Tsuneki worked at the Zoological Institute of Hokkaido University from 1944 to 1952. He received a Ph.D. there in 1950. From 1952 until his retirement in 1973, Dr. Tsuneki was Professor of Zoology at Fukui University in Fukui, Japan.

In 1931-1932 he was a "general soldier", serving as a meteorological observer in the Japan Air Force. From 1937 to 1940 during the Japanese occupation of China, Tsuneki was stationed in northern China and Inner Mongolia. In his "leisure hours", he studied the behavior of ground nesting wasps. Much of this work was published in a 1942 book: "A Naturalist at the Front", Nippon Publishing Co., Osaka (in Japanese). The same year he also published "A Naturalist's year in Inner Mongolia" (in Japanese).

Dr. Tsuneki published his first paper in 1929, some biological observations on a species of *Eumenes*. His last publication apparently was a taxonomic paper on Philippine Mutillidae which constituted issue 41 of the *Special Publications of the Japan Hymenopterists Association* (May 20, 1993). Dr. Tsuneki was a prodigious worker. The total number of publications generated during his lifetime can only be approximated but it exceeds 600.

In his early years he was a student of behavior, and until the late 1940's, nearly all of his papers dealt with the biology of wasps and other insects. In 1946 he published a book in Japanese titled "The Japanese hunting wasps, their ecology and psychology", Northern Publishing Co., Sapporo. In 1948 his extensive behavioral studies of *Bembix niponica* resulted in a book titled "A Research Account of the Japanese Long Nosed Wasp, *Bembix niponica* Smith". The behavioral work carried out by Tsuneki in these early years was first

rate. As he expanded his observations he discovered that much taxonomic work had to be done before he could determine the species that he was studying. Thus he eventually began taxonomic studies of wasps, particularly Sphecidae, but also Chrysididae, Tiphidae, Mutillidae, Scoliididae, Pompilidae, Vespidae and bees. Tsuneki's work centered on the Japanese fauna initially, but he published extensively on the wasp faunas of Taiwan, the Philippines, Korea, Mongolia and southeast Asia.

Dr. Tsuneki was dedicated to Japanese natural history, and in 1957 he started a serial publication entitled *The Life Study*, which contained articles in Japanese for and by Japanese students on all sorts of subjects. In 1973, after 17 issues (or volumes), *The Life Study* came to an end. The following year Dr. Tsuneki initiated *The Hymenopterists Communication*, another Japanese language periodical. This journal was designed as a vehicle for papers by Japanese students on Dr. Tsuneki's favorite animals, wasps. Of course, he included his own research in both journals. The last issue of *The Hymenopterists Communication* appeared in 1987 and contained an autobiography of Dr. Tsuneki in Japanese.

While at Fukui University, Tsuneki started a journal titled *Etizenia*, the first issue of which appeared in 1963. *Etizenia* primarily contained taxonomic papers on wasps and was in English. When Dr. Tsuneki retired, *Etizenia* came to an end at 66 issues. Within two years he initiated another journal, the *Special Publications of the Japan Hymenopterists Association*. It appeared from 1976 to 1993 with a total of 41 issues. Most of the papers in it were authored by Tsuneki so that in essence it was his private journal. Papers were in English. During his writing career Dr. Tsuneki published in Japanese, English, German and French.

In the 1960's and 1970's Dr. Tsuneki published many papers on the behavior, biology and breeding of canaries and other birds. In 1971 the Ornithological Society of Japan gave Tsuneki an award in recognition of his ethological and psychological studies of canaries. He also published popular books on spiders and ants.

Some of the major behavior/biology papers by Tsuneki include studies of *Bembix*, *Cerceris*, *Pemphredon*, *Spheg*, and color vision in ants. He published

on the taxonomy of various families of wasps and bees, but his main focus was the Sphecidae where he published extensively on *Cerceris*, *Trypoxylon*, and various genera of Crabronini. Unfortunately, Dr. Tsuneki worked largely in isolation, and he rarely studied type material of earlier workers, relying instead on their original descriptions. Thus, in time, some of his new species will probably fall into synonymy. Tsuneki's papers often included identification keys and generally his new taxa were well illustrated. Unfortunately he sometimes focused on certain body areas, neglecting obvious good characters elsewhere.

Some years ago, thanks to the efforts of Karl Krombein, the Smithsonian Institution acquired most of the Tsuneki Hymenoptera collection, including holotypes. His Japanese holotypes remain in Japan, however, and their disposition is currently unknown. The journals *The Life Study* and the *Hymenopterists Communication* were designed for Japanese distribution primarily and probably are not readily available outside that country. Complete, or nearly complete sets reside in the Hymenoptera library at the Smithsonian either in original or xerox form. We also have complete sets of *Etizenia* and the *Special Publications of the Japan Hymenopterists Association*.

A. S. Menke

# Reminiscences of Dr. Katsuji Tsuneki by Karl V. Krombein

My friendship with Dr. Tsuneki dates back to 1954 when he wrote to say that he was sending me a set of his reprints, and asking that I send him a set of my own. Thus began a long friendship marked by voluminous correspondence and several visits with him in Japan.

In my first letter I asked whether he would be interested in exchanging wasps, especially paratypes of species described by him. He was delighted to accept my proposal, and during the next three years we made several exchanges of Sphecoidea and Chrysidae that benefitted both collections and our knowledge of the two faunas. He pointed out that some of our Nearctic species were actually subspecies of Palaearctic taxa. When I advised him that *Pemphredon mandibularis* Tsuneki had been used

earlier by Cresson, he responded graciously by proposing *krombeini* for the Japanese species. He explained that he had named many Japanese species *mandibularis* because this characteristic structure had been overlooked by earlier workers.

During June 1971, my last month as departmental chairman, Arnold Menke showed me a letter from Tsuneki in which he mentioned that he intended to send "types, paratypes and important specimens" to some foreign museum when he retired in a few years. I wrote to him at once, asking that he give favorable consideration to donating his collection to the Smithsonian for a number of reasons, among them the size and geographic scope of our collection, and the presence here of three specialists on aculeate Hymenoptera, Hurd, Menke and myself. Tsuneki did not reply to this letter, and I decided that I should visit him in Fukui during my next trip abroad.

Early in 1972 I began an extensive foreign trip because of my involvement with the Smithsonian's "Ceylon Insect Project." The news of my coming visit impressed him, because he wrote that not even a Japanese hymenopterist had visited his laboratory. He met me at the airport in Fukui, and took me by taxi to the Biological Laboratory of Fukui University. Tsuneki had two large rooms on the third floor. One of them housed large cages, each holding numerous canaries, the subject of a series of papers, 1960-1971, that he published on social organization and behavior in dense flocks of caged birds. The other room was his entomology office containing his collection housed in an estimated 300 boxes of Schmitt box capacity. From the roof of the laboratory there was a fine panoramic view of the mountains which included Tsuneki's favorite haunt, Mt. Haku or Hakusan as the Japanese call it familiarly, Japan's most sacred mountain after Fuji.

In 1973 Tsuneki invited me to be his guest during a collecting trip on Mt. Haku. I returned to Fukui in September, and Tsuneki and his friend, Mr. Tadashi Tano, a high school teacher in Fukui and an aculeate hymenopterist, met me at the airport. Tano drove us to a small village, Ichinose, at the base of Mt. Haku. We left our luggage at the inn, and collected along one of the trails up the mountain that afternoon. Dr. Ichiji Togashi, a sawfly specialist, joined us

at the inn, having obtained collecting permits for our party, and special permission to drive farther up the mountain than usually allowed.

Later we had a long refreshing soak in hot spring water in a Japanese bath. After donning a kimono provided by the inn, we had a good dinner of sushi, radishes, soup, small cooked trout and a sweet biscuit. We also had four large Kirin beers, mostly consumed by Tano and myself. That evening after dinner, Tsuneki told me that he had decided to split his collection, part to remain in Japan, the remainder to come to the Smithsonian. We slept on mats on the floor; I slept poorly because I was unaccustomed to the hard Japanese "pillow".

We arose at 5:15 the next morning, and drove to 1500 m above sea level. After climbing for about an hour, we had breakfast, cold sticky rice wrapped in seaweed! The collecting was poor because it was so cool — mostly ichneumonids and bumblebees. We continued climbing, mostly over rocks and loose stones and pebbles, not at all dangerous, and reached an inn near the summit by 11 a.m. There we had a warming cup of hot sake. Then we continued to climb, reaching the summit, 2702 m, about 11:45. This called for a celebration featuring sake, beer, and more of the seaweed-wrapped sticky rice and snacks. We had a splendid view from the summit of the surrounding peaks, sometimes obscured by clouds.

We began the descent, and reached the inn by 4 p.m. We separated, Tsuneki and Tano returning to Fukui, and Togashi driving me to Kanazawa. There I boarded the train to Osaka to spend a couple of days with Kunio Iwata in Kobe.

My last visit with Tsuneki was in November 1977. Dottie and I had an overnight stop at Haneda Airport enroute from Hong Kong to Washington. Tsuneki was kind enough to travel from his retirement home in Mishima to our hotel in Haneda. We entertained him at lunch with Chinese food, a preference that he developed during his wartime service in China and Mongolia. He confirmed again that he would donate part of his collection to the Smithsonian. On the personal side, he told us that he and his wife had three sons, aged 35 to 25 at that time; this was an interesting coincidence to both of us inasmuch as Dottie and I had three daughters, 34 to 25. He also told us that daily he ran 5 km in 25 minutes at 5 a.m. He had to

return home at 3 p.m., so I walked with him to the monorail station to Tokyo where we said our final farewells.

He did not attend the International Congress of Entomology in Kyoto in 1980, and I was unable to visit him. During the early '80s we corresponded frequently on research progress. I was able to assist his revisionary studies by the loan of types and other identified species, especially Oriental *Tiphia* and Philippine Trypoxylini and Larrini, and also by furnishing Xerox copies of literature not available to him. Not all of his waking hours were devoted to revisionary studies, and late in March 1983, he wrote that "spring has come to my little garden and many flowers, including hundreds of camellias, have begun to bloom."

Early in December 1984 he wrote that when his study of Japanese *Tiphia* was completed he would send in increments his collection of Japanese Hymenoptera. During the following February he asked me to send 50 cardboard shipping boxes, saying that "they will move to and from between you and me like space shuttle." During May 1985 he said that he had packed 50 boxes, and would be sending them by airmail. He also mentioned that for some years he had suffered from temporary cerebral thrombus, and that during a recent attack he had suffered a ruptured disk in the lower spine. He was receiving medical treatment, and was able to continue light work. He hired some local help to finish the packing, and get the cartons to the post office. During June and July we received the 21 cartons containing Tsuneki's generous donation.

Subsequently, he wrote of his concern about providing for his wife who was some years younger. We negotiated the purchase of his Taiwanese collection of Sphecoidea, Pompilidae, Mutillidae, Scoliidæ, Tiphidae, and miscellaneous Vespoidea and Apoidea made during his two visits in 1966 and 1968. It contained some 7300 specimens, and included the extensive type series of the taxa described in his revisionary papers on those groups of wasps. He sold his large collection of Oriental Chrysididae elsewhere. His final donation to the Smithsonian in 1993 was of the holotypes of some 50 taxa of Philippine Sphecidae and Mutillidae described in several of his most recent papers.

We continued our correspondence and cooperative loans 1985 through

1992. Concerning his health as of August 1992, he wrote that he had "chronic disease of lumbar severance [disk problem ?] and cerebral arteriosclerosis" and was taking medications. He added, "... now for the daily life there is no serious hindrance and am enjoying the wasp study." Actually, he was laboring most of the time on a revision of the Japanese *Sphecodes*, the parasitic halictine bee with bright red abdomen that has such a wasplike appearance, but that study was not completed at the time of his death. The parasitic bees that resembled wasps were his only taxonomic interest among the bees, and earlier (1973) he published what amounted to a large revision of the Japanese *Nomada*.

Tsuneki's long scientific career fell into two phases. At the beginning he was particularly interested in the natural history of solitary wasps. The early technical papers, 1929-1943, were almost entirely on the nesting and other behavior. His systematic papers began in 1945 with short lists of Korean crabronines and chrysidids, but the bulk of his output through the 1940s continued to be natural history studies. His difficulties in providing identifications for the wasps whose behavior he studied led to increasing output of revisionary studies beginning with his treatment of *Pemphredon* of Japan and adjacent regions in 1952. He continued publication of occasional studies of wasp behavior, and his last in 1982 was on the nesting and cocoon construction of *Gorytes tricinctus* that lived "....generation after generation in my little garden." Beginning in 1960 he published predominantly systematic studies including a series of substantial revisions of the Taiwanese and Philippine wasp faunas.

I remember my friend Tsuneki as a generous person, a thoughtful host, and a dedicated scientist who published extensive, well illustrated taxonomic contributions on the Oriental wasp fauna, as well as notable behavioral studies of *Bembix niponica* and various species of *Sphex*.



## Souvenir de Paul Maréchal (1889-1973)

par

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Arnold Menke et d'autres amis voudraient que j'agrémente *Sphecos* de mon histoire personnelle. Cela m'embarrasse parce que je ne vois pas bien comment éviter les excès d'égotisme ou de modestie. Mais je sais par quoi commencer mon devoir.

Je ne serais probablement pas devenu naturaliste, surtout pas entomologiste et hyménoptériste si je n'avais pas connu Paul Maréchal comme professeur de biologie à l'Athénée Royal de Liège où je fis mes humanités classiques de 1933 à 1939.

Ces humanités, je ne l'ai jamais regretté, attribuaient une importance primordiale à l'étude du latin, du grec et d'au moins deux langues germaniques, tandis que la musique, la chimie et la biologie étaient les moins importantes des branches secondaires. Le programme officiel de la biologie comportait surtout la description et l'anatomie de types tenus pour représentatifs de la diversité des Animaux et des Végétaux. Maréchal avait un certain talent pour présenter ça mais il voulait aussi montrer que la science est affaire de gens curieux et méthodiques, même de modestes amateurs. Je fus très impressionné par la première leçon qu'il nous donna en 1934; j'avais 13 ans.

Pour Maréchal, il était essentiel qu'on commence par apprendre que *les animaux et les végétaux ont un nom scientifique et une place dans la classification, conformément à des règles internationales dont les premiers principes ont été indiqués «par le grand savant suédois Charles Linné»*. Je l'entends encore nous dicter à peu près ceci:

«Un nom scientifique est composé nécessairement de trois noms: le genre, l'espèce et le parrain (*sic*). Le nom du genre et le nom de l'espèce doivent être en latin; le nom du genre avec une majuscule. Exemples: *Canis familiaris* Linné, *Felis domestica* Brisson. Quand un savant trouve une espèce inconnue (et il y a encore beaucoup d'espèces inconnues), il lui donne un nom qui doit être différent des autres noms d'espèces déjà donnés dans le genre en



question. Mais on peut trouver le même nom dans des genres différents; par exemple beaucoup de plantes et d'animaux de genres différents s'appellent *vulgaris*, beaucoup de végétaux *officinalis*. On constate parfois que les savants ont donné deux noms, ou plus, à la même espèce; alors c'est le nom le plus ancien qui a priorité.

La classification est à plusieurs niveaux. Le plus élevé est le *Règne* (Règne Animal ou Végétal). Les Règnes sont divisés en *Embranchements*, nous les soulignerons en vert. Ceux-ci sont divisés en *Classes*, nous les soulignerons en rouge (n'oubliez pas de le faire dans votre cahier chaque fois que vous écrivez Mammifères, ou Oiseaux). Les Classes sont divisées en *Ordres*, que nous soulignerons en bleu, par exemple les Rongeurs. Enfin les Ordres sont divisés en *Familles*, que nous soulignerons en jaune, dans lesquelles on place les Genres qui ont beaucoup de caractères communs.»

Mes condisciples ne furent sans doute pas spécialement impressionnés par cette introduction formaliste. Pour moi, c'était formidable! D'abord parce que ça révélait l'existence d'un système cohérent et universel justifiant les noms des plantes médicinales figurées dans le livre de médecine familiale et les inscriptions sur les arbres et dans les plates-bandes du Jardin Botanique. Ensuite parce que ça faisait entrevoir la possibilité d'un passionnant passe-temps personnel: trouver le nom scientifique et la famille de toutes ces plantes et bestioles vivant près de chez nous, que les gens ordinaires ne nommaient pas. Curiosité scientifique précoce? Si l'on veut, mais pourquoi pas aussi naïve prétention pour épater?

Le printemps 1935 étant là, Maréchal imposa que chaque élève apporte deux ou trois petites plantes en fleurs ou un bout de branche d'arbre avec quelques feuilles. C'était pour nous montrer comment on fait un herbier. J'en apportai un tel paquet qu'il m'invita à revenir pendant la récréation; alors il aurait le temps de donner un nom à toutes ces plantes. Je revins plusieurs fois, même en hiver, pour avoir ses déterminations et apprendre à utiliser le *Nouveau manuel de la Flore de Belgique et des régions limitrophes* de J. Goffart (1934). J'avais plaisir à entendre ce que si tranquillement il racontait à propos de chaque plante et des insectes qu'elle attirait, et à pro-

pos des trouvailles entomologiques des élèves qui m'avaient précédé, venus solliciter ses conseils et son érudition.

Dès mars 1936, ce sont des insectes trouvés près de chez moi que je venais montrer à Maréchal. Il encourageait en indiquant les rares ou assez rares, méritant d'être signalés dans sa prochaine «*Liste d'insectes intéressants récoltés par le Cercle des Entomologistes Liégeois*» (société dont il était président depuis 1932). Son aide et mon zèle firent tant qu'il me proposa de rédiger avec lui la *Liste* de 1938; ce fut ma première publication.

Maréchal m'avait bien expliqué qu'il y avait quatre sortes d'insectes:

(1) Ceux que Maréchal pouvait déterminer immédiatement, à l'oeil ou sous la loupe.

(2) Ceux qu'il devait examiner chez lui au microscope, avec les ouvrages adéquats (souvent en allemand) et sa collection de référence. Compréhensible pour les insectes plus ou moins petits, cette complication étonnait quand elle était requise pour des aussi gros et ordinaires que la plupart des *Bombini* et des *Vespini*.

(3) Ceux qui ne pouvaient être déterminés que par un autre spécialiste belge. Par exemple les petits Coléoptères, beaucoup de Diptères.

(4) Ceux qui ne pouvaient être déterminés que par un spécialiste étranger. Par exemple, on envoyait les *Proctotrupoides* à H. Maneval, en France, les *Chalcidoidea* à L. Masi, en Italie. Parfois ces spécialistes ne déterminaient que le genre, suivi de *sp.* Pour certaines abeilles, il fallait demander confirmation des déterminations pourtant faites avec leurs clés dans Schmiedeknecht (1930) à P. Blüthgen et E. Stöckert, en Allemagne.

Tout cela signifiait que la faunistique et la systématique des insectes avaient grand besoin de chercheurs, de jeunes. Pourquoi pas moi? Les entomologistes échangeaient des insectes et des informations, s'entraidaient à Liège, en Belgique, dans le monde. Il y avait une sorte d'Internationale des Entomologistes qui défiait les frontières, les rancoeurs de la Grande-Guerre, la Guerre d'Ethiopie en cours, la Guerre d'Espagne qui commençait. Je voulais être de cette réconfortante fraternité!

Maréchal n'était pas seulement soucieux de faunistique; il était excellent observateur sur le terrain. Ses listes de captures contenaient aussi des notes originales par exemple sur les fleurs

butinées, le site. On lui doit plusieurs mémoires d'éthologie détaillée, la plupart relatifs à des Hyménoptères, qui ne sont pas passés inaperçus dans la littérature entomologique mondiale. Mais il a aussi rapporté de nombreuses observations dont certaines très originales n'ont pas retenu l'attention méritée parce qu'elles paraissaient sous le titre trop général de «*Notes biologiques*». La référence de ces *Notes* est donnée ci-après avec précision du contenu quand celui-ci concerne un Hyménoptère; permettez-moi d'insister sur la qualité remarquable des observations sur l'accouplement d'*Eurytoma mayri* (1932) et sur *Megachile circumcincta* découpant des rondelles dans un rideau de fenêtre (1935).

J'avais compris qu'il faut se spécialiser. Maréchal préférait les Hyménoptères; je fis le même choix parce que moi aussi je trouvais les Hyménoptères plus provoquants, plus étranges dans leur aspect, leur allure fébrile, leurs travaux. Les observations de Maréchal sur les rubicoles étaient des modèles (1927, 1929, etc.); j'en fis aussi et il approuva le texte de ma première et modeste note «*La biologie des Passaloecus* (Hym. Sphegidae)» (Lambillionea 1939: 60-62).

Pour mon premier maître, la science devait être non seulement objective et sans compromis mais on devait être honnête. L'honnêteté impliquait qu'on n'ignore pas les auteurs précédents «même s'ils avaient publié en flamand ou en polonais»(sic). Mais comment avoir accès à cette littérature? Pour aider, Maréchal prêtait volontiers des articles de sa bibliothèque. Alors on ne photocopiait pas, il fallait recopier à la plume. J'en ai copié des dizaines, à commencer par les articles de Maréchal lui-même dont sa réserve était épuisée. Le dernier des articles qu'il me prêta pour laborieuse calligraphie fut (how funny!): «A.H. Hamm, A.L.S. assisted by O.W. Richards, B.A., *The Biology of British Crabronidae*, Transactions of the Entomological Society of London, 1926, pp. 297-331».

Quand j'entrai à l'Université de Liège, en octobre 1939, j'avais donc une collection et une documentation privilégiant les Hyménoptères, tandis que l'Armée Allemande avait envahi la Pologne.

Je raconterai une autre fois ce que j'ai pu faire ensuite, n'ayant plus besoin de l'aide de Paul Maréchal. Il avait été soldat de la guerre 1914-1918 et souffrait d'avoir été gazé; il fut très affecté par la



mort au front, en mai 1940, de son premier et brillant disciple le biospéléologue Robert Leruth; pendant l'Occupation, il refusa de publier mais il continua à étudier les Aculéates, discrètement. Il fut de nouveau actif dès 1945, surtout en militant pour la protection des sites exceptionnels, particulièrement riches en Orchidées et en Aculéates, qu'on trouve de part et d'autre de la frontière entre Liège et Maastricht, dans ce qu'on appelle en Belgique la Montagne Saint-Pierre, dans les Pays-Bas Sint-Pietersberg. Dans cette oeuvre, il fut secondé par son autre disciple hyménoptériste Jacques Petit, qui a continué à surveiller les Hyménoptères de ces sites du côté belge, Virgilius Lefebvre s'en occupant aussi des deux côtés de la frontière.

La vie et l'oeuvre de Maréchal ont fait l'objet d'éloges dans quatre publications dont voici la référence. Mais on n'a publié nulle part la liste de ses travaux; je suis reconnaissant à *Sphecos* d'accepter la partie de cette liste qui concerne particulièrement ou partiellement des Hyménoptères.

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## NEWSLETTER NEWS

### PROCTOS to resume:

We are coming to you with good news. With Spring 1994, there is new energy and good intention to rekindle the newsletter PROCTOS. After eleven years of service (1975-1986) PROCTOS slipped into dormancy for seven long years. Perhaps it was the dwindling group of students studying Proctotrupoidea or perhaps just a general fatigue that caused the temporary diaspora. However, during the past several years there has been an encouraging renewal in proctotrupoid studies; several new students emerged and new projects started. It occurred to us that the time is ripe to resuscitate the oldest newsletter (est. 1975) on Hymenoptera in order to assist and further invigorate the new process.

Naturally, we need your help, your ideas and suggestions. Please contact:

Lubomir Masner  
BDR, CLBRR  
Agriculture Canada  
K.W. Neatby Building, CEF  
Ottawa, Ontario K1A 0C6  
Canada

### TACAYA

(Boletín para investigadores en abejas, avispa y hormigas)

Editor: Guiomar Nates-Parra, Departamento de Biología, Universidad Nacional de Colombia, A.A., 23227 Santafé de Bogotá D. C., Colombia.

The first issue of TACAYA appeared in October, 1993, and number 2 appeared in July 1994. Patterned after *Sphecos*, this newsletter is designed to keep Colombian aculeate workers informed of current research, events, literature, etc. Issue 2 contains observations on the nesting of *Trigonopsis* and *Auplopus* by Fernández and other items of interest.

### BEMBIX

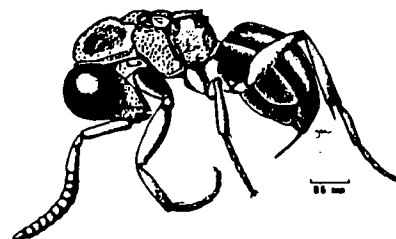
(Rundbrief für alle Freunde der Akuleaten Hymenopteren)

Editors: Christian Schmid-Egger & Heinrich Wolf.

Two issues of this new newsletter for aculeate workers in central Europe have appeared. Issue 1 appeared in June 1993 and contained 15 pages. The second number appeared in February of 1994 and had swollen to 48 pages, perfect-bound, a fine example of desktop publishing. BEMBIX is reproduced in Germany. Like TACAYA it contains the same sorts of information presented in *Sphecos* and other newsletters, but it and TACAYA are directed toward narrower audiences. For further information on BEMBIX see announcement below:

Christian SCHMID-EGGTER, Waldstr. 4, D-76133 Karlsruhe, Germany, and Heinrich WOLF, Umlandstr. 15, D-58840 Plettenberg, Germany, publish a periodical BEMBIX for Aculeata (Hymenoptera) lore. Number 1, containing 15 pages, was issued in October 1993. Number 2, containing 48 pages, was issued in February 1994. BEMBIX will be published twice a year. It will be a platform in the German language for Central Europe, aimed at collectors, specialists and friends of Aculeata (Chrysididae, Formicidae, Eumenidae, Vespidae, Pompilidae, Sphecidae, Apidae and minor aculeate families). It will offer its pages for queries, for reports on collections and congresses, and for discussions of taxonomic problems. It will contain a bibliography for Aculeata, starting with 1980 and continuously supplemented. Articles of a scientific character as well as advertisements concerning purchase offers and requests will not be accepted by BEMBIX. For German subscribers the price will be DM 5,00 per year in stamps; foreign subscribers will receive BEMBIX free of charge.

Heinrich Wolf



*Myrmecomimesis bispinosus* (Riek.), female. (Chrysididae, Queensland, Australia)

## FORUM

**Subgenus vs Group of Species**  
(that is, "species group" sensu  
Sphecos 10:11-13, 11:11-13, 26:5)

by

**Alexandr P. Rasnitsyn**

Paleontological Institute, Russian Academy  
of Sciences, Profsoyuznaya Str. 123  
Moscow 117647 Russia

I vote against the group of species and in favor of the subgenus, more-over, in favor of a number of subordinate categories between genus and species (subgenus, infragenus, section, etc.), for the following reasons:

(i) The International Code of Zoological Nomenclature (London, 1985) does not mention the group of species (also known under the name of species group, but don't confuse with the species group in sense of the Code!) under the genus group (Article 42a) or the species group (Article 45a). Indeed, the group of species is a surrogate taxon lacking its own name and using the name of its type species instead. Therefore this taxonomic category falls out of the scope of the Code which is defined as operating on the names of taxa, not the taxa themselves (most explicitly: ICZN, Preamble, p. 3; Article 1a).

(ii) Among the key elements basic to the ICZN, and of zoological nomenclature generally, the first cited is "(1) The Code refrains from infringing upon taxonomic judgment, which must not be made subject to regulation or restraint" (ICZN 1985: xiii). Therefore, if I need to have a series of nested taxa subordinate to genus to organize the system of a particular group properly, I should be free to use them.

## Response to Rasnitsyn

It is not clear to me why Alex is unhappy with the species group category since he seems interested in using a variety of other infrageneric categories. It is true that the Code does not address the species group (or "group of species" in Rasnitsyn's terminology) but that is because there is no need to. That is the beauty of the concept. Species groups convey information without cluttering our huge list of genus-group names. Subgenera have their place, but that taxon is often used to excess when the species group would convey just as much information.

A. S. Menke

## SCIENTIFIC NOTES

**Concerning Michael Prentice's  
Observations on Aculeate Wasps  
In Lebanese Amber.**

by

**Alexandr P. Rasnitsyn**

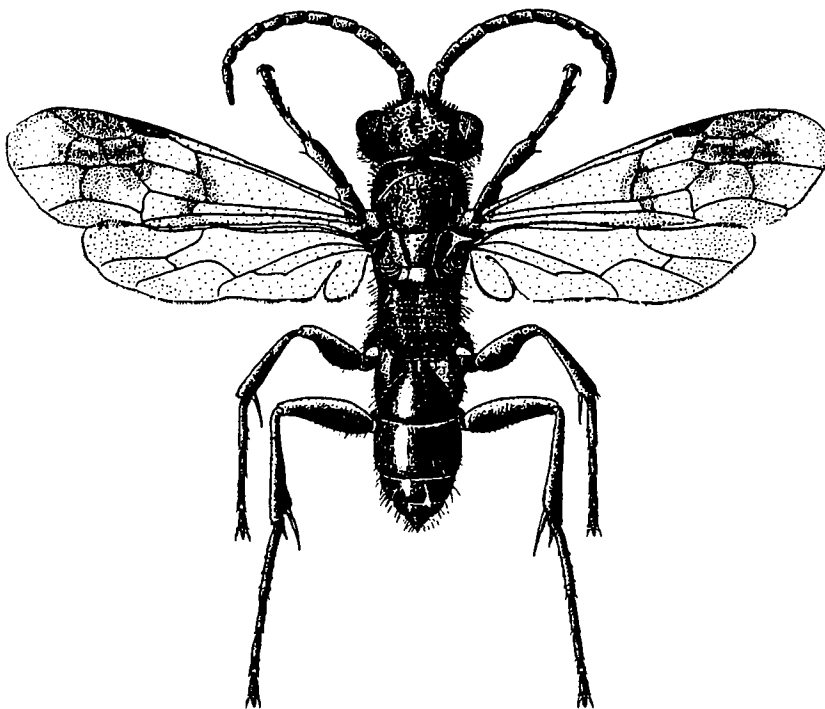
Lebanese amber Hymenoptera represent an ancient and interesting gap in the hymenopteran fossil record.

Hymenoptera have been known to occur in this amber at least since Hennig (1969) (who mentioned an ant, probably erroneously, on p. 366) and Schlee & Dietrich (1970) (who mentioned Terebrantia and Aculeata). Yet Prentice's note (Sphecos 26:8) is the first meaningful information for a quarter of century.

The report of 15 aculeates found in the amber may be comparatively many, or equally may be few. Unfortunately we are not told of the size of the total collection. This is of importance, for some fossil resins give higher percentages of Hymenoptera than others, and their distribution in these ambers is not completely chaotic (Rasnitsyn, 1980: 160, Table 5). This could also prove true for Aculeata specifically.

The composition of the fauna reported by Prentice after a cursory examination of the difficult amber material (Scolebythidae, ?Dryinidae, Bethyridae, and Sphecidae) does not contradict my expectations very much. The absence of Chrysididae is unexpected since this family is common in other known Cretaceous fossil resins. More attention might be given to the Scolebythidae, as the case of *Cretabythus* Evans indicates (despite the general and venational similarity to Scolebythidae it was found to belong elsewhere (Rasnitsyn, 1988)).

The finding of Ampulicinae in this amber is significant. The only other Lower Cretaceous Ampulicinae known are two discovered in the Aptian (middle Lower Cretaceous) of Santana Formation, Brazil. One of them is described as an ant, *Carinidris bipetiolata* (Brandao a.o. 1989), another as an unnamed member of Ampulicinae(?) (Darling & Sharkey, 1990: 147). To my mind, both are closely related but distinct at least at the species level. The third Cretaceous ampulicine is *Gallosphex cretaceous* Schluter (1978: 83) from the Lower Cenomanian (lowermost Upper Cretaceous) of NE France. These findings support the Aptian rather than Neocomian age of the fossil resin at Jezzin in Lebanon (Whalley, 1976).



*Dipogon variegatus* Spinola (Linnaeus), male. (Pompilidae, Europe, North Africa)

As to Prentice's hypothesis that Sphecidae (s.l.) may extend well back into the Jurassic, I can see no evidence of this sort. Unfortunately, we know Jurassic insects, and hymenopterans in particular, practically only from Eurasia, and this weakens all of our inferences. I have seen a collection of Gondwanan Jurassic insects from India (in the Museum of Comparative Zoology, Harvard University, Cambridge, MA) which included two typically Jurassic hymenopterans, one Sepulcidae and one Ephialtitidae. This changes little, however. The succession from assemblages of the Jurassic type toward those of the Cretaceous type can be observed only in Eurasia and primarily in Siberia, Mongolia and, probably, China. The transition in Hymenoptera can be characterized as the more or less simultaneous appearance of aculeate wasps, Ichneumonidae, higher Proctotrupoidea (more advanced than Heloridae, Mesoserphidae, and Roproniidae s.l.), Gasteruptiidae, and a lot of subordinate groups (Tenthredinidae, Trigonalidae, Megaspilidae, Cynipoidea, etc.). This shift cannot be dated precisely at present, but certainly does not extend far into the Jurassic.

It can be minimally said at present that assemblages of Cretaceous type have never been found in deposits originating prior to the major shift in assemblages of non-marine ostracods (from those leading by Darwinulaceae and Cytheraceae to Cyperidaceae-governed ones). In the classic sections of England this shift correlates with the base of the Lower Purbeck.

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#### Some Further Notes on Lebanese Amber Aculeata.

by

Michael Prentice

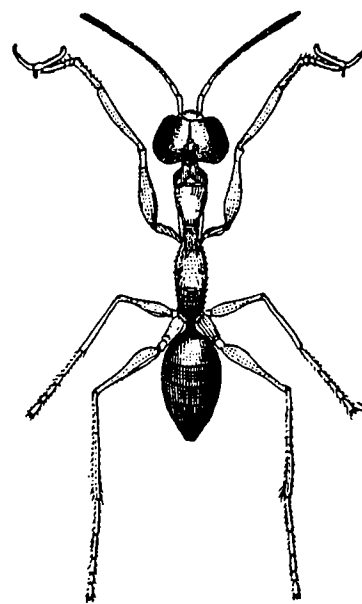
Dept. of Entomology, University of California, Berkeley, CA 94720

In response to Rasnitsyn's note, I have included some additional information on the fossils I mentioned in *Sphecos* 26. I have examined portions of two collections of Lebanese amber, each comprising over a thousand insect inclusions according to their owners. In one of the collections I had the opportunity to examine 62 insect fossils which yielded 10 Hymenoptera (6 Parasitica and 4 Aculeata). In the other collection I identified 30 Hymenoptera, but did not record the total number of specimens examined. Of these Hymenoptera, 19 were Parasitica and 11 Aculeata. The state of polish of the specimens is quite poor in both of the collections largely due to the fragility of the amber, but the condition of the pieces may be greatly improved for study by embedding in clear plastic. Many of the fossils are fragmentary so family identification in most cases is quite difficult. Among the Parasitica were what I believed to be Chalcidoidea, Proctotrupoidea and Evanioidea.

The scolebythid I mentioned in *Sphecos* 26 is definitely of this family since it possesses nearly all of the synapomorphies of the group including the highly characteristic modifications of the propodeus. Of interest is the complete lack of R1 in the forewing of the wasp giving it a more reduced venation than extant

scolebythids. Reduction in R1 is also seen in another fossil scolebythid that I have identified from much younger Dominican amber.

I have had a chance to reexamine the ampulicine that I mentioned in my last note. Its similarity to *Ampulex* is more superficial than I had initially believed but it is definitely an ampulicine. It clearly shows well developed pronotal lobes and an entirely dorsal U-shaped propodeal enclosure. It also possesses a clearly developed omalulus and an elongate pronotum as in many Ampulicinae. Of great interest is the form of the face which is unfortunately badly distorted. It is apparent that the clypeus consists of two partially projecting lateral plates between which projects a thin bifid nasiform process originating from the upper part of the clypeus. The mandibles, which are somewhat elongate, oppose the serrate edges of the plates and the nasiform process. These same modifications are partially evident in a much smaller ampulicine measuring no more than 1.5 mm in total body length. This small wasp is pictured in Poinar (1992, *Life in Amber*. Stanford University Press.) where it is listed as a possible ant. The other Early Cretaceous Ampulicinae from the Santana formation mentioned by Rasnitsyn can only be tentatively assigned to this subfamily. They are simply too poorly preserved to allow more definitive placement.



*Agonotopoides synchronus* Perkins, female. (Dryinidae, Arizona)

***Podium plesosaurus* (Smith): the  
Second Known Specimen  
(Sphecidae)**

by  
**Arnold S. Menke**

This wasp was described in 1873 from a single female taken at Ega (= Tefé), Brasil, and since then apparently has not been collected. I found a specimen of this elegant creature while sorting through tree fogging material collected in Peru by Terry Erwin and his associates. It is a female and agrees with notes and sketches that I made in 1972 while studying Smith's holotype (see Menke, 1974). The locality is Rio Tambopata Reserve (30km SW Puerto Maldonado), 290m, Madre de Dios, Nov., 7, 1983. This specimen is in the National Museum of Natural History, Washington DC.

Menke, A. S., 1974. A preliminary review of the *agile* group of *Podium* Fabricius (Hymenoptera: Sphecidae). J. Wash. Acad. Sci. 63:147-153.

**Further Records of  
Neotropical *Pison***

by  
**Arnold S. Menke**

*Pison gnythos* Menke

PERU, **Madre de Dios**: Rio Tambopata Res, (30 km sw Puerto Maldonado), 290m,

March 9, 1984, T. Erwin, one female.

This is the first record from Peru for this wide ranging species. The specimen is in the National Museum of Natural History.

***Larra godmani* in southern Texas**

by  
**Arnold S. Menke**

*Larra godmani* Cameron is recorded from central Mexico to Argentina and Uruguay (Menke, 1992). Recently I identified some miscellaneous *Larra* for Lionel Stange, Florida State Collection of Arthropods, Gainesville, Florida. Among the material were two females of *godmani* collected in Hidalgo County, Texas by Charles Porter. These specimens represent the first US record for this species. Both were taken at the

McAllen Botanical Garden in McAllen, Texas in May 1973 and November 1983. The abdomen is completely red in these specimens and the upper interocular distance = 0.40X the lower interocular distance.

Menke, A. S., 1992. Mole cricket hunters of the genus *Larra* in the New World (Hymenoptera: Sphecidae, Larinae). J. Hym. Res. 1:175-234.

**Identification of Lee's (1986)  
new species of**

***Vespula* and *Dolichovespula*  
(Vespidae, Vespinae)**

by

**Michael E. Archer**

Dept. of Science, University of Ripon and  
York St. John, York YO3 7EX, England

In 1990 Professor Lee Tiesheng lent me material of the new taxa that he described in 1986. These specimens enabled me to clarify their status (Archer 1993). Professor Lee (1993) has just published a book on the Vespidae of China and other parts of Asia, but apparently my analyses of his taxa appeared too late for inclusion in the book since no mention is made of them. I have seen holotypes of only two of Lee's species, the other material being paratypes. Thus I can only positively identify two of Lee's species. But based on the specimens examined, all of his species, with one exception, appear to be synonyms. The status of Lee's 1986 species is outlined in the list that follows.

*Vespula kingdonwardi* Archer, 1981  
syn.: *V. hirsuta* Lee, 1986 (paratype queen seen).

*V. rufa* (Linnaeus, 1758)  
syn.: *V. obscura* Lee, 1986 (paratype queen seen).

*Dolichovespula asiatica* Archer, 1981  
syn.: *D. xinjiangensis* Lee, 1986, p.p. (allotype male seen).

syn.: *Vespula yichunensis* (paratype male seen). See note below speculating that this specimen may be *Vespula rufa schenckii* Radoszkowsky, 1861.

*D. lama* (du Buysson, 1903)  
syn.: *D. nyalamensis* Lee, 1986 (two workers seen).

*D. media* (Retzius, 1783)  
syn.: *D. borealis* Lee, 1986 (paratype worker seen).

*D. stigma* Lee, 1986 (holotype worker seen).

NEW SYNONYMY *D. sinensis* Archer, 1987

*D. sylvestris* (Scopoli, 1763)

syn.: *D. xinjiangensis* Lee, 1986, p.p. (paratype worker seen).

*Paravespula koreensis* (Radoszkowski, 1887)

NEW SYNONYMY *Vespula hainanensis* Lee, 1986 (holotype worker seen).

*P. flaviceps* (Smith, 1870)

syn.: *Vespula gafcilia* Lee, 1986 (paratype worker seen).

The only real ambiguity in the above list is the identification of the male specimen of *Vespula yichunensis* Lee. According to Lee (1986) the male of this species is unknown! The description and illustrations given by Lee (1986) do not agree with the specimen I have seen. The data on the label do not agree with that given in Lee (1986) but do agree with the label data of *D. xinjiangensis*. I suspect that there has been some misplacement of data labels. Thus I have probably not seen *V. yichunensis*. As I indicated earlier (Archer, 1990), *V. yichunensis* is probably a synonym of *V. rufa schenckii*, but until authentic specimens are seen this view is speculative. I have raised this matter with Professor Lee, but so far I have had no reply.

**Literature cited**

Archer, M.E., 1990. Some reaction to the book reviews of "A key to the World Species of the Vespinae (Hymenoptera)" with some further information on Lee's "New Species". Sphecos 20:6.

Archer, M.E., 1993. Further news on *Dolichovespula* and Lee's nine 'new' species of *Vespula* and *Dolichovespula* (Vespinae). Sphecos 24:12.

Lee, Tiesheng, 1986. Notes on the genus *Dolichovespula* from China (Hymenoptera: Vespidae). Sinozoologia 10(4):195-200.

Lee, Tiesheng, 1986. Notes on the genus *Vespula* from China (Hymenoptera: Vespidae). Sinozoologia 10(4): 201-206.

Lee, Tiesheng, 1993. The development & utilization of the hornet resources in China. Science Press, Beijing, China. 170 p.

## SOCIAL WASPS

### *Pollistes dominulus* in Ohio

by

Robert S. Jacobson

Department of Pathology School of  
Medicine East Carolina University  
Greenville, NC 27858

The only data I can personally add is that I collected an incipient colony of *P. dominulus* near Middleburg Heights, Cuyahoga Co., Ohio in June 1992, having a foundress, eggs and small larvae. The nest was suspended under a roof.

### *Vespula germanica*, a serious Problem in Australia

from the Adelaide "Advertiser":

Fears as dangerous wasps spread  
by Jon Murrie

The European wasp, *Vespula germanica*, which can inflict a potentially deadly sting, has emerged as a major threat in the metropolitan area.

Local councils have warned that the number of wasp nests found this summer has surged and there are fears they may no longer be able to control them.

After several years of confinement to the Adelaide Hills and foothills suburbs, the wasps are now breeding in the north and south of the city and in some beach-side suburbs.

The Local Government Association says that unless steps are taken immediately, the problem will worsen.

It has called on the State Government to unite with councils to devise a strategy to control the wasps.

The Government indicated last night it was ready to hold talks on the problem.

"There's now a need to take affirmative action; it's getting out of hand," the LGA's president, Mr. John Dyer, said yesterday.

"Local government has been endeavoring to control the wasps, but there are not always the resources and there is a complete lack of research into controlling them.

"It's getting to the stage where we just won't be able to control them."

Mr Dyer said the lack of any single authority to monitor and combat the wasp was one of the major factors which had allowed it to spread through the metropolitan area.

In the eastern suburbs 231 European wasp nests have been destroyed since October – an increase of at least 25 per cent on last year.

In the Marlon Council area, officers have destroyed at least 100, having reported only six last summer.

Unley Council has also experienced a large increase, having destroyed 98 nests last year and already 170 this year. Mitcham, Munno Para and Tea Tree Gully, St. Peters, Happy Valley and Henley and Grange councils also have reported increases.

The introduced wasp, *Vespula germanica*, is capable of repeated stings causing greater pain than a bee and potentially fatal to those who are allergic to its venom.

The wasps are often attracted by foods and drinks and although not normally aggressive can swarm from a nest and attack if disturbed.

A particular danger is their attraction to soft drink cans, which could result in a sting to the throat and possible asphyxiation.

But because the wasp is not considered an agricultural threat, the Department of Primary Industries has no involvement in its control, leaving responsibility with the councils.



## ICZN NEWS

### OPINION 1754

*Histoire abrégée des insectes qui se trouvent aux environs de Paris*

(Geoffroy, 1762): some generic names conserved (Crustacea, Insecta). Bulletin of Zoological Nomenclature 51 (1):58-70, March 1994

#### Ruling

A. *Histoire abrégée des insectes ...* (Geoffroy, 1762)

(1) Under the plenary powers it is hereby ruled that, notwithstanding the use of polynominal specific names in the work by E.L. Geoffroy (1762) entitled *Histoire abrégée des insectes qui se trouvent aux environs de Paris*, the generic names published in that work are deemed to be available. The ruling

is confined exclusively to the availability of generic names. Specific names and nomenclatural acts are not to be taken from the work.

(2) This work is hereby deleted from the Official Index of Rejected and Invalid Works in Zoological Nomenclature and placed on the Official List of Works Approved as Available for Zoological Nomenclature with an endorsement to reflect the ruling in A(1) above, namely that the generic names published in this work are deemed to be available.

(3) Such editorial changes in the Official Lists and Indexes as are necessary from the rulings in A(1) and (2) above and in related previous Opinions are hereby authorised.

### H. Insecta, Hymenoptera

(1) It is hereby confirmed that all uses of the name *Crabro* prior to that by Fabricius (1775) are suppressed for the purposes of both the Principle of Priority and the Principle of Homonymy.

(2) The following names, conserved by the ruling in A(1) above, are hereby placed on the Official List of Generic Names in Zoology:

(a) *Diplolepis* Geoffroy, 1762 (gender: feminine), type species by subsequent designation by Karsch (1880) *Cynips rosae* Linnaeus, 1758;

(b) *Eulophus* Geoffroy, 1762 (gender: masculine), type species by subsequent monotypy (Olivier, 1792) *Ichneumon ramicornis* Fabricius, 1781;

(c) *Urocetus* Geoffroy, 1762 (gender: masculine), type species by subsequent monotypy (Fourcroy, 1785) *Ichneumon gigas* Linnaeus, 1758.

(3) The following names are hereby placed on the Official List of Specific Names in Zoology:

(a) *gigas* Linnaeus, 1758, as published in the binomen *Ichneumon gigas* (specific name of the type species of *Urocetus* Geoffroy, 1762);

(b) *ramicornis* Fabricius, 1781, as published in the binomen *Ichneumon ramicornis* (specific name of the type species of *Eulophus* Geoffroy, 1762);

(c) *rosae* Linnaeus, 1758, as published in the binomen *Cynips rosae* (specific name of the type species of *Diplolepis* Geoffroy, 1762).

(4) The entry for *Crabro* Geoffroy, 1762 on the Official Index of Rejected and Invalid Generic Names in Zoology is hereby amended in accordance with the ruling in H(1) above.

## TECHNIQUES

I have one "publishable" comment on Vardy's Chloroform Gun. I have heard about it, and even tried to use an "improved" apparatus. But the thing doesn't work very well, probably due the substitution of the chloroform by ethyl acetate when I tested it. Also, I firmly believe that the *Centris* male (see my report of my collecting trips in *Sphecos* 25:16-20) and the *Podium rufipes*, for instance, would fly away in the same way if I had used the C. Gun. They are too fast for a normal human being; one could guess that they had a kind of turbine or rocket somewhere in the body. However, I have to admit that if I had tried to use chloroform instead of any other thing, it could work with creatures that are not as fast, as *Trypoxylon* or *Polistes*. But it won't work with "rocket propelled" sphecids and bees. Another problem would be the large amount of chloroform that I would have to transport during one month, in a van completely filled with all kinds of traps, vials, Berlese funnels, alcohol gallons, axes, a pick and all the stuff that one could imagine for a team composed of myrmecologists, apidologists, termitologists and aculeate hunters. Anyway, I intend to try the C. Gun again in my next collecting trip. That is, if I have more space to transport more things.

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Museu de Zoologia  
Universidade de São Paulo  
Caixa Postal 7172  
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## COLLECTING REPORTS

Spring Collecting in the  
California Coast Ranges  
by  
Arnold Menke

The focus of this trip was the Spring wasp fauna of the Coast Ranges of California, particularly the sphecids genus *Ammophila*, which is being revised by me. In early May, my wife Nancy, and I flew to San Francisco, rented a car, and

drove south to the hamlet of Parkfield in southeastern Monterey County, an isolated area accessible only by secondary roads, some of which are unpaved. We approached Parkfield from Coalunga. Driving west from Coalunga on highway 198 we reached a dirt road called the Parkfield Grade which winds its way over a mountain and down into the valley where Parkfield is located. The views along this road are pretty nifty, and spring wildflowers were in abundance, but collecting was poor. Parkfield, elevation 1500+ feet, consists of a one room schoolhouse, a small country inn, a cafe, a Santa Fe caboose converted into a store, and a few dwellings. It is situated in a valley containing Little Cholame Creek which flows southward. We stayed at the Parkfield Inn four week-day nights, and were the only guests! Peace and quiet for sure.

Parkfield calls itself the "Earthquake Capitol of the World" because the San Andreas Fault is very close by. A laser beam station has been operating there for about 10 years, monitoring shifts in the fault. We were fortunate to go on a special tour of the laser facility that is perched on a hill just south of town. The tour was given by Duane Hamann, the local school teacher, who operates the station. He has discovered that the Pacific Plate shifts back and forth. Movement is not just northward. The fault runs directly under the 60 year old road bridge just south of Parkfield, and the bridge has a very obvious bend in it due to Pacific Plate movement.

Nancy and I first collected along the edge of Ranchita Canyon road a few miles southwest of Parkfield. *Eriogonum* and other plants were in bloom attracting various Hymenoptera. At this time last year Nancy and I had noted numerous *Ammophila murrayi* here, a coastal endemic, but we had no collecting gear. This time we were prepared. We managed to take *murrayi*, *parkeri*, *karenae*, and *pruinosa*, but collecting was slow. The next day we drove up Slacks Canyon road in Bear Valley, to a spot about a mile beyond the end of the pavement, where Cholame Creek crossed the road. Bear Valley is just west of Parkfield on the other side of the ridge. Initially we collected in the ravine formed by the creek and were rewarded by collecting various wasps and bees. An acrocerid fly, *Turbopsebius diligens* (Osten Sacken) [det. Norm Woodley], was very common at isolated spots in the ravine, and

Nancy and I bagged over 100 of them. We followed the dry creekbed upstream until it more or less ended in a broad meadowy pasture the hilly edges of which were covered with much white sand. An obvious wasp site! We were soon picking up all kinds of wasps along the surface of a dirt road, among them the metallic blue *Dryudella caerulea*, and *Podalonia caerulea*. *Ammophila* were fairly plentiful and we returned to this site the next two days. Species taken here included *Ammophila murrayi*, *parkeri*, *pruinosa*, *parapolita*, *nearctica*, and *strenua*. *A. nearctica* proved to be fairly common and we captured many – the species is not common in collections. During our four days we took 111 *Ammophila*, not a large haul, but we got some fine species.

We greatly enjoyed our stay at the Parkfield Inn. It was so quiet that all you could hear were birds and the breezes in the treezes. The local peacock serenaded (?) us at times, and once a herd of escaped cows came through the grounds of the Inn, providing Nancy and me with a few minutes of fun. At \$45 a night for two, the rooms are very reasonable. A continental breakfast is included. The cafe across the street provides great eats and you can play horse shoes out back if you want to. Acorn woodpeckers abound and their chatter often fills the air. We especially enjoyed the morning sun while sipping coffee on the steps of the Inn's veranda. Parkfield is a fine place to get away from it all and enjoy some pretty good collecting, fine scenery and peace and quiet.

We drove back to San Francisco and stayed two days with Woj and Veronica Pulawski. During our stay they organized a dinner get together with Michael Prentice, a grad student at the University of California, Berkeley, who is conducting a landmark cladistic analysis of Sphecidae, and his fiancé Kim Brett. This permitted the three of us to discuss various classificatory problems, and for Woj and I to learn first hand of some of the exciting findings that Michael has made so far.





## MUSEUM/COLLECTION NEWS

### Michigan State University's Insect Collection

by  
Virginia Scott  
University of Colorado Museum  
Campus Box 218  
Boulder CO 80309-0218

The Insect Collection at Michigan State University contains several million specimens. There's some history I'm not going into here, but Dr. Roland Fischer did a lot to increase the holdings of the collection. We all know there was a period of time when specimens were all but impossible to get on loan from MSU. Whether this was due to a lack of funding, or idiosyncrasies, is no longer important. What is important at this time, is to let researchers who are unfamiliar with this collection know what is at MSU.

Dr. Fred Stehr and his band of merry entomologists have done much in the past several years to begin reorganizing the collection. Loans are again being sent out. Before I left (in January to start work as the Collection Manager at University of Colorado in Boulder) I did a "fast and dirty" inventory of the Hymenoptera in MSU's collection. Basically, I counted the number of Cornell drawers of each group, dividing them into two categories: determined and undetermined. It should be noted that each drawer of undetermined material is packed to the point of near explosion. Drawers of determined material aren't quite that full. A table of the aculeate wasps follows.

MSU is the Land Grant Institution in Michigan, and of course Michigan insects represent a good part of their holdings. However, there is a surprisingly large amount of material from the Western US, Mexico, Central and South America (Chile especially). Other parts of the world are represented much more irregularly, but it's still worth asking about.

Loan requests can be directed to Dr. Fred Stehr, Department of Entomology, 243 Natural Science Bldg., Michigan State University, East Lansing, Michigan, 48824-1115.



Number of Cornell drawers at Michigan State University containing Aculeate Wasps:

	Det.	Undet.
<b>Bethyloidea (= Chrysidoidea)</b>		
Bethylidae	1.0	0.0
Sclerogibbidae	0.0	0.0
Chrysididae	10.0	1.0
Dryinidae	0.0	0.5
Embolemyidae	0.0	0.0
<b>Scoliidea (= Vespoidea)</b>		
Tiphidae	7.0	2.0
"Thynnidae"	1.0	1.0
Sierolomorphidae	0.0	0.0
Mutillidae	7.0	5.0
Scoliidae	3.0	1.25
Sapygidae	0.75	0.0
<b>Formicoidea (= Vespoidea)</b>		
Formicidae	11.0	7.0
<b>Vespoidea</b>		
Masariidae	0.25	0.0
Eumenidae	17.0	5.0
Vespidae	17.0	3.0
<b>Pompiloidea (= Vespoidea)</b>		
Pompilidae	42.0	9.0
Rhopalosomatidae	0.0	0.0
<b>Sphecoidea (= Apoidea)</b>		
	0.0	11.0
Ampulicidae	0.25	0.0
Sphecidae	18.0	6.0
Pemphredonidae	4.0	1.0
Astatidae	2.0	0.0
Larridae	7.0	2.0
Crabronidae	14.0	1.5
Mellinidae	0.5	0.0
Nyssonidae	15.0	0.0
Philanthidae	13.0	1.0

### Bohart Museum Gets New Quarters

by

Steve Heydon

Bohart Museum, Department of  
Entomology, University of California, Davis  
CA 95616-8584

After more than 20 years of continuous growth, the Bohart Museum finally burst its cocoon and recently moved into new quarters. The pinned and slide-mounted insect collections are now housed in two compactors that give us the capacity to double our current holdings. The alcohol collection is housed in steel cabinets in a separate room. We also now have a large enough li-

brary room to house all our books and journals. Three offices are being used by the staff and a row of study carrels is available for graduate students and visiting researchers. As part of the NSF facilities grant funding the move, we were able to purchase some new microscopes and lights so any researchers wishing to visit the museum will have good equipment to use. We were also able to inventory the collection at the generic level. Despite the fact that we are now located in a building across the campus from the Entomology Department (room 1065 of the Academic Surge Building), our mailing address (Bohart Museum, Department of Entomology, University of California, Davis CA 95616-8584) and phone numbers [Lynn Kimsey (Director) 916 752-5373, Steve Heydon (Collections Manager) and Dick Bohart (Emeritus) 916 752-0493, FAX 916 752-1537] are still the same.

The collections of the Bohart Museum currently amount to more than 6 million prepared specimens and 1,500 primary types. Our holdings are worldwide in scope with emphasis on the western United States, the Neotropics, and Australia. Significant recent acquisitions include material from Madagascar, Ecuador, and Australia. Since all the current staff are students of various groups of Hymenoptera, this portion of the collection is growing the fastest. Volunteers and graduate students are also continually adding to our holdings of Coleoptera and Lepidoptera.



## NEW BOOKS

Beinen, Wespen und Ameisen der Kanarischen Inseln, vols. 1 and 2, H. Hohmann, F. LaRoche, G. Ortega, and J. Barquin, editors, 1993. These volumes constitute vol. 12 of the Veröffentlichungen aus dem Übersee-Museum Bremen Naturwissenschaften.

These two volumes survey the aculeate Hymenoptera of the Canary Islands in great detail. Provided for each species are references, distribution maps and information on mainland distribution, elevations, flight periods, and flower records. Thirteen vespidae and sphecidae species are beautifully illustrated in

color by Helmut Riemann. Vol. 2 includes several papers by specialists in which new taxa are described. Of interest to aculeate wasp workers is one on the Bethyridae by Martin Sorg, one on Chrysididae by Walter Linsenmaier, and one on Pompilidae by Heinrich Wolf.

Of the 319 species treated, 42% are endemic, but the percentage rises to 59% when subspecies are included, bringing the total taxa for the islands to 369. Wasps (including ants) constitute nearly two thirds of the aculeate fauna, with 199 species. There are 120 species of bees.

The introductory and overview material at the beginning of the first volume is in German and Spanish which will make it accessible to a wider audience.

A. S. Menke

**The Bee Genera of North and Central America** (Hymenoptera: Apoidea). Charles D. Michener, Ronald J. McGinley and Bryan N. Danforth, 1994. Smithsonian Institution Press, Washington D.C. x + 209 p. \$45

This book is primarily an identification guide to the 169 genera and higher taxa of bees of North and Central America, and it achieves this in an admirable fashion. Over half of the book consists of identification keys that are presented in a two column format. The left column is in English, and the right column in Spanish. This two-language format will make the book user friendly to a much larger audience. The keys are illustrated with high quality line drawings, shaded drawings, photographs, and scanning electron photomicrographs. These figures are scattered through the keys so that they are optimally located for the user. In the introduction users already familiar with bees are told how to streamline their use of the keys. The authors state that the keys have been reviewed and tested by various bee experts. Thus the keys should generally work well.

The introductory section includes information on how to recognize a bee, collection and preservation of specimens, importance of floral records, and terminology, the last very well illustrated.

Following the keys is a section titled "Notes on the genera". Here the user is provided with descriptive notes and distinguishing features for each family and

genus; a synopsis of the classification of each family; and citations of publications containing keys to species, generic studies, etc. For each genus the distribution is summarized, flight periods indicated, and the number of species given. Habitus photographs illustrate species of representative genera, although sometimes drawings are used.

Several appendices at the end of the book include a brief summary of changes in classification and nomenclature (some being newly inaugurated in this volume), a classification of the bees of North and Central America in a tabular format, and anticipated classificatory changes. In the last appendix, we learn that Anthophoridae should be included in Apidae.

This is a fine looking, reasonably priced book and it should facilitate identification of bee genera for many people, something that heretofore has not been a simple matter. It should also serve as a model for others to follow when developing similar identification guides.

A. S. Menke

**Identification Guide to the Ant Genera of the World.** Barry Bolton, 1994. Harvard University Press, Cambridge, Massachusetts. 222 p. (Order from the Press at 79 Garden Street, Cambridge, Mass. 02138-9983; USA FAX: 800-962-4983, International FAX: 617 495 8924). List price is \$65, but the book is on special discount at \$52 until November 1, 1994.

This book provides identification keys to the 16 subfamilies and 296 genera of ants. The introduction gives the user a general overview of ants. Bolton estimates that there are about 15,000 species, only two thirds of which have been described. He provides the reader with references to general works on ants, including catalogues, and then presents an overview of classificatory problems, an outline of zoogeography and a discussion of how to properly mount ants. Finally Bolton offers helpful suggestions on how to use the keys. He points out that they are based entirely on workers, and that reproductives are too poorly known for some genera (or even unknown in some groups) to produce useful keys to them.

A diagnosis of the family Formicidae introduces the main part of the book. A

key to subfamilies follows this. The bulk of the book consists of thorough individual subfamily treatments. Each starts with a tabular list of characters, followed by keys to genera (which are by zoogeographic regions in the larger subfamilies), a synopsis of infrasubfamily classification, an accounting of geographic distribution, annotated taxonomic references, and ends with scanning electron photographs of faces and side views of the thorax and abdomen of selected genera. The photographs are quite striking and splendidly display the amazing variety of forms found in Formicidae. The 522 photographs, which are referenced throughout the keys, should enable anyone to identify ant genera. Unfortunately for the user, none of the photographs have generic name identification labels. It would have been more work to label the figures, but it would have been very beneficial.

Other features of the book include a synopsis of extinct subfamilies, references to faunistic papers by country or region, an illustrated glossary of morphological terms, and a terminal bibliography. The glossary is near the end of the book instead of the more traditional position. Terms are given in boldface with "acceptable alternatives in parentheses", however, Bolton is inconsistent. The synonymous terms Flagellum (of the antenna) and Funiculus are both listed in boldface with their counterpart in parentheses. I suppose this is a concession to common usage. Ant workers use "alitrunk" for the mesosoma (or thorax), but as ant classification seems to be based largely on wingless workers, alitrunk is something of a misnomer. Bolton could have advised, as he did for the archaic term epinotum, that the name is used only by myrmecologists. He could have also suggested, as he did under epinotum, that ant workers adopt mesosoma (or thorax), which is nearly universally used in the rest of hymenopterous morphology. These are minor items, however, and in no way diminish the landmark nature of this book. It should be on the shelf of any hymenopterist.

Harvard University Press is to be congratulated on publishing this companion volume to their earlier production, *The Ants*, by Hölldobler and Wilson. Both volumes are quite reasonably priced.

A. S. Menke

In his introduction, Bolton talks about the dynamic nature of taxonomy, and in three paragraphs he succinctly outlines why this is so. I found his explanation well stated, and I have taken the liberty of reproducing his remarks here:

"(1) Improvements in collecting and ecological sampling techniques continue to unearth previously unknown taxa. These must be fitted into the classification or the system must undergo modification in the light of the new information. Newly discovered taxa may be placeable directly into the current classification or they may demand that modifications to the system must be made. For instance, newly acquired material may indicate that two taxa previously considered distinct are in fact synonymous, or the reverse, that two taxa previously considered synonymous should be separated. They may also indicate that the present suprageneric classification is unacceptable, that supposed relationships between taxa are incorrect, or that zoogeographical knowledge of the group is deficient.

"(2) Collections from small areas and the subsequent description of their faunas, as if isolated from, and without regard for, the fauna of the rest of the world, frequently produce a welter of unnecessary names based on uncritical splitting, unrecognized identity, and misinterpretation of generic limits. This was particularly true in the nineteenth and early twentieth centuries, when the amassing of names seems to have been an end in itself, with authors apparently racing each other to produce as many self-attributed names as possible. Of necessity, modern taxonomists must spend much of their time undoing these ancient taxonomic tangles and setting the nomenclature and classification to rights. This is an ongoing process, still far from complete.

"(3) The basic structure of, and any modifications made to, the classification must be well founded upon scientific fact and must improve its predictive properties as well as indicate firmer groupings among the various taxa.

"These considerations should dispel the frequently made assertion that taxonomists merely change names around to upset other, nontaxonomic, zoologists. On the contrary, every alteration of status, every change of name, every shift in classification, must be in response to newly acquired information,

must bring clarity where previously there was turbidity, must improve the classification, and must be done with an aim to increasing our understanding of the natural world."

## NEW JOURNALS

### Journal of the Ukrainian Entomological Society

This new journal from Apollo Popular Science Publishers, c/o Schmalhausen Institute of Zoology, 252601 Kiev MSP, Ukraine, first appeared in 1993. Subscription prices for 1993 (including shipping and handling) are US\$60 or BEF 2100,- (institutions) and US\$40 or BEF 1400,- (private individuals). Contact: Mr. Willy De Prins, Diksmuidelaan 176, B-2600 Antwerpen, Belgium.

### Amber & Fossils

This is a new Russian magazine on paleobiological and geological aspects of amber studies. It is published in Kaliningrad by the Museum of the World ocean. "AF" is a journal for specialists interested in amber studies, with particular emphasis on biological amber inclusions. This journal revives the experience of the famous edition *Bernstein-Forschungen* (Konigsberg). Submitted papers will be considered by competent editorial advisors. "AF" will publish high quality papers within the following fields:

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### SUBSCRIPTION INFORMATION:

"AF" is published semiannually. Subscription rates for 1993 are US \$ 30 (individual), US \$ 45 (institutional). Single issue price is: US \$ 16 (individual) US \$ 25 (institutional).

## JOURNAL AVAILABILITY

### Atlas provisoire des Insectes de Belgique (et des régions limitrophes)

Le département zoologique de la Faculté d'Agronomie de Gembloux a édité de 1970 à 1985 une série intitulée "Atlas provisoire des Insectes de Belgique (et des régions limitrophes)" qui a comporté des cartes de répartition de nombreux Hyménoptères, y compris tous les Aculéates de la faune belge. Il a aussi édité à partir de 1979 des "Notes Fauniques de Gembloux" qui traitent souvent d'Hyménoptères (et ont été signalées dans les "Recent Literature" de *Sphecos*). Pour obtenir ces éditions, l'adresse est maintenant: Prof. Charles Gaspar, Zoologie générale & appliquée, Faculté des Sciences Agronomiques B 5030 Gembloux (Belgium).

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Volker Mauss, Reinhold Treiber and Christian Schmid-Egger

Published by the Deutscher Jugendbund für Naturbeobachtung (DJN) at Hamburg, this soft cover guide includes sections on biology, collection and preparation, notes on individual species, and a key to nests. Text is in German.

To order, contact: DJN, Justus-Strandes-Weg 14, D-22337 Hamburg, Germany.

## THE ETERNAL SEARCH FOR STING RELIEF

Regarding Wasp Stings  
and Electricity  
by

BeeBuster James C. Allen  
1413 Curry Rd. Schenectady N.Y. 12306

I have experimented with a charcoal grill propane starter for reducing the reaction from wasp stings and believe it has value. My well read M.D. mentioned the *Lancet* article to me a few years ago and I considered trying a voltage coil from the old model T Ford, a two cycle leaf blower, or a small chain saw.

When the starter on my Kenmore gas grill quit, I purchased a new one at Sears for twelve dollars and realized its potential. Its delivers quite a wallop and can be carried in your pocket or glove compartment. I use it on the sting site immediately and believe it does reduce my reaction.

I often receive stings daily collecting *Dolichovespula*, *Paravespula*, and *Vespula*. *Paravespula flavopilosa* has the most toxicity (personal observation), while *Vespula squamosa* gets most formidable and dangerous award with its perennial nests attaining chinese lantern size.

*P. maculifrons* is the most aggressive and has the ability to find the aggressor (per. ob.). *P. germanica* is the most pestiferous scavenger, home dweller, and sheetrock chewer, with the largest nests in the North East, but is the wimp and nurd of the group. In the genus *Dolichovespula*, the white-faced hornet, *D. maculata*, is slow but painful, while *D. arenaria* has a short season (3 weeks), but is pugnacious.

From the Smithsonian Staff Bulletin,  
Aug. 13, 1993:

... Watch out for those bees, wasps, and yellow jackets ... if one stings you, wash wound with soap and water, apply ice, and apply a paste made from meat tenderizer (which contains enzymes that destroy the proteins in venoms) ... these procedures reduce pain and swelling. If allergic to stings, take prescribed medicine and contact a doctor.

## BIG BLUE BOOK ERRATA Part 22

- p. 78, LC, L 21: Moluccas is correct, not Malaya.
- p. 78, LC, L 25: ?Mexico or Australia is correct entry for distribution.
- p. 78, LC, L 6 from bottom: 1895 is correct, not 1894.
- p. 92, LC, L 21: *brasiliense* is correct.
- p. 181, LC, L 6 from bottom: 1932 is correct, not 1931.
- p. 182, LC, L 2 and 3: 1932 is correct, not 1931.
- p. 459, RC, L 3: 1894 is correct.
- p. 481, LC, L 12 from bottom: *foersteri* Fritz, 1958 is a valid species (see Fritz, 1974:196). Place after *diezguitas* and add Argentina for distribution.
- p. 508, LC, L 1: *houskai* belongs in the genus *Harpactus* (see de Beaumont and Bytinski-Salz, 1959:106). Transfer name to p. 496.
- p. 528, RC, insert as synonym after L 13 from bottom: *alienus* Fischer-Waldheim, 1842 (*Pompilus*). Authority is Harttig, 1932, Konowia 11:146.
- p. 539, LC, L 9 from bottom: Replace (*Bembex*) with (*Monedula*).
- p. 545, RC, L 15: *boaliri* is correct spelling.
- p. 564, RC, L 2 from bottom: Sudan is correct, not Ethiopia.
- p. 589, LC, L14 from bottom: *villiersi* is correct and Niger is country (not Mali).

Correction of Errata 21 (Sphecos 26: 22):

- p. 184, RC, L 7: Kohl, 1905 is correct, not 1805.

## SPHECOS ERRATA

In Sphecos 26:24, the paper by Leclercq n° 2: Atlas... has two authors: Jean Leclercq & Yvan Barbier – not just one.

In Sphecos 12:29. one of my papers was not properly recorded: Leclercq... Gaspar... Verstraeten: it is not 1984 but 1985; it is not Cartes 1901 but 1801.

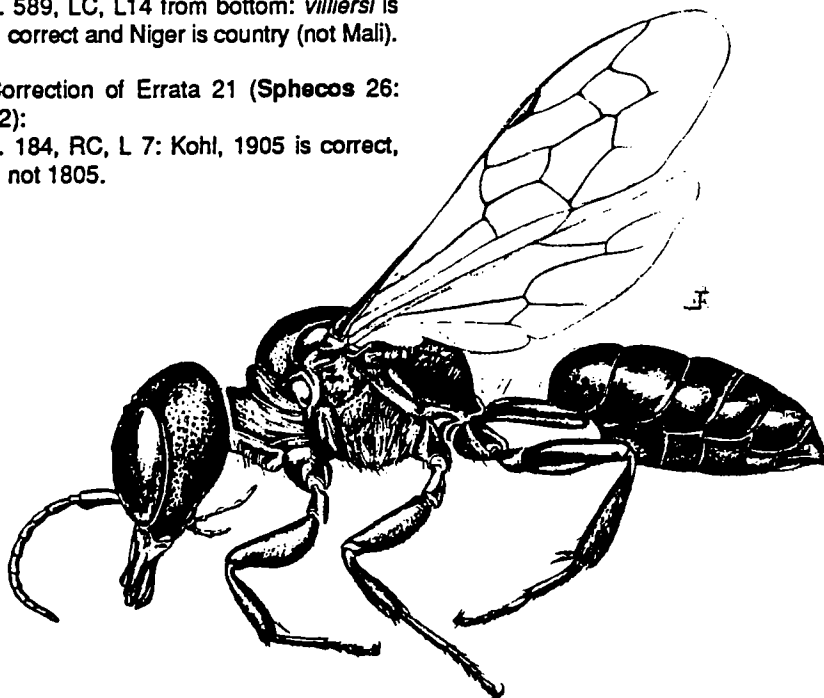
Jean Leclercq

In Sphecos 26 on page 9, in Martin Cooper's article on *Ageleia testacea*, add the following to line 5 after the word "flying": towards each other.

### E-mail typo

As some of you who may have tried to use it have discovered, the e-mail address for Sphecos published in the notice on the front page of issue 26 is incorrect. However, the correct address appears in the address box. Again, the e-mail address is:

TNUHN@ASRR.ARSUSDA.GOV



*Pemphredon confertim* W. Fox, female. (Sphecidae, western U.S.)

## RECENT LITERATURE

(Worth a look: McGinley, 1994, Olmi, 1993a, Roig, 1993, Mauss & Treiber, 1994 and Schmidt-Egger, 1994.)

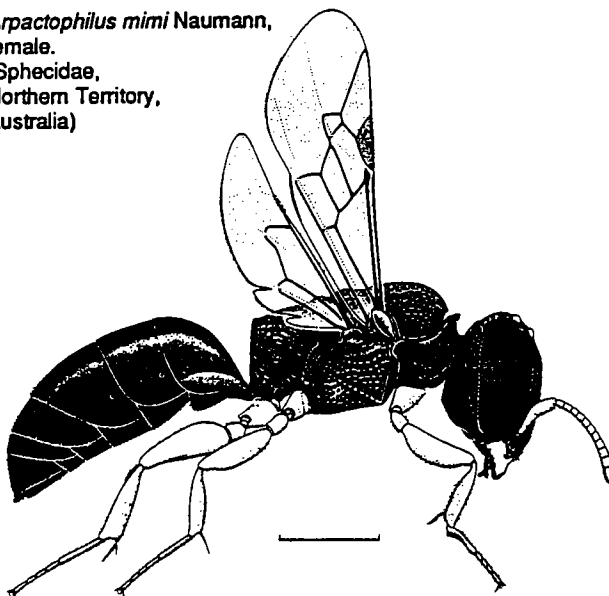
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*Arpactophilus mimi* Naumann,  
female.  
(Sphecidae,  
Northern Territory,  
Australia)



## Third Colloquium of the Russian-speaking Section of the International Union for the Study of Social Insects

The **Third Colloquium** of the *Russian-speaking Section of the International Union for the Study of Social Insects* will be held in Kiev (Ukraine) from Monday 26 September until Sunday 2 October 1994. The scientific meetings, round tables and discussions are scheduled for three full days, the other two days being devoted to excursions all over Kiev and its suburbs. Papers presented for the Colloquium (up to 10 pages in Russian or in English) will be printed in "Proceedings of the Russian Colloquia on Social Insects."

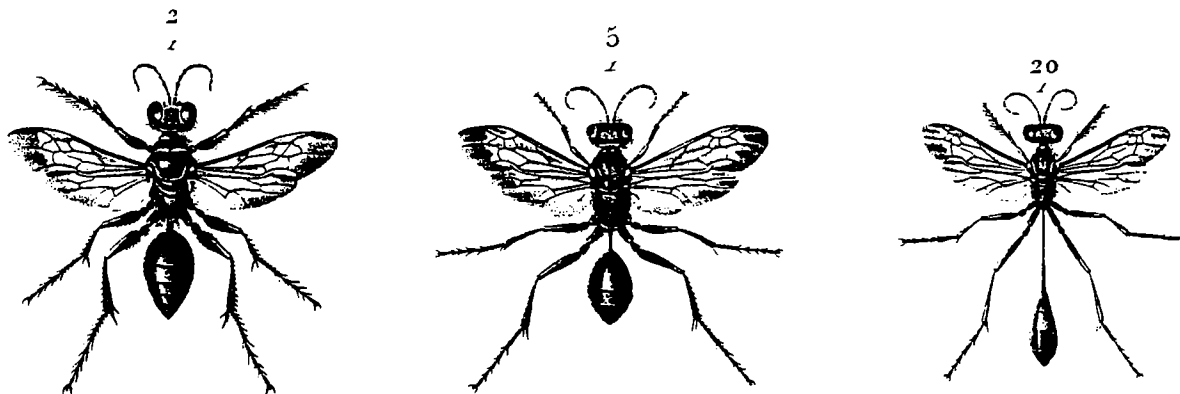
The participation fee will be \$50 (including the cost of the "Proceedings" publication). The preliminary assessment of other costs for a participant (accommodation in a cheap hotel, meals, etc., but no travel expenses) is altogether \$80-100. This amount should be paid after the arrival to Kiev.

We would be happy to see our colleagues from other sections of IUSSI among the participants of the Colloquium.

If you intend to participate please send us at the address given below the following information: your full name, title of a lecture, address, e-mail address, telephone and fax numbers. We will send out a second announcement in June 1994. The deadline for registration is 15 August 1994.

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Selected figures from Plate 14 of *Description d'Égypte*, J.C. Savigny, ca. 1826.



